

**GREEN OAKS FIRE PROTECTION ACT (SB 575):
IMPLEMENTATION POLICY****Policy 11-01****References:**

California Fire Code (CFC)
California Building Code (CBC)

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Discipline: Fire and Life Safety

A DSA Policy is a formally established set of governing statements based on law and code objectives, addressing any aspect of DSA's plan and construction review program that is not clearly addressed by code. Policy also may specify administrative or technical requirements that are not yet addressed within Title 24, but are deemed important and necessary to fulfill code objectives in advance of adoption into the code.

Background: Senate Bill (SB) 50, also known as Leroy F. Greene School Facilities Act of 1998 (or "the Greene Act"), was chaptered into law on August 27, 1998, establishing the state funding program for public K-12 facilities.

SB 575 (O'Connell), also known as the Green Oaks Family Academy Elementary School Fire Protection Act, became law on January 1, 2002 adopting fire protection requirements for projects funded under the Greene Act. SB 575 requires automatic fire sprinkler systems and automatic fire alarm systems in various school construction projects.

SB 575 provides that all projects that are subject to this law and submitted to DSA for review on or after July 1, 2002, include automatic fire sprinkler and automatic fire alarm systems, as required.

Purpose: The purpose of this DSA Policy is to answer questions about when automatic fire sprinkler or automatic fire alarm systems are required, what is required and how compliance can be achieved. The following definitions are provided to assist the reader. More complete definitions can be found in the California Fire Code (CFC) and the California Building Code (CBC).

1. Definitions

1.1 Equipment and Facilities Related Terms

- **Educational Building** – Group "E" Occupancy as described by the CBC Section 305. Group includes among others, the use of a building or structure, or a portion thereof, by more than six persons at any one time for educational purposes through the 12th grade
- **Automatic Fire Alarm** – As applied to fire protection devices, is a device or system providing an emergency function without the necessity for human intervention and activated as a result of a predetermined temperature rise, rate of temperature rise or detection of smoke. Automatic does not require anyone to activate an alarm.
- **Manual Fire Alarm** – A manually operated device used to initiate an alarm signal. The manual device requires human activation.
- **Automatic Fire Sprinkler System** is an approved system of devices and equipment, which automatically detects a fire and discharges water onto or in the area of the fire. For water based systems, an alarm signal is sent to the fire alarm control panel when water is flowing or when the system water supply is shut off. Other fire suppression systems are also required to send signals to the fire alarm panel.

1.2 Funding Related Terms – The following subset of terms applies to State funded projects only.

- **State Funded** – Projects funded, in whole or in part, under the Leroy F. Greene School Facilities Act of 1998.
- **Existing Campus** means a school project consisting of one or more buildings on a site for which application was made to DSA prior to July 1, 2002; per definition found in CBC Chapter 2, Section 202.
- **New Campus** means a school project consisting of one or more buildings on a new site for which application made to DSA on or after July 1, 2002; per definition found in CBC Chapter 2, Section 202. This includes future buildings added to these new campuses
- **Modernization** means any modification of a permanent structure or construction of a new building on an existing campus per definitions found in CBC Chapter 2.
- **Temporary Relocatable Building** means a classroom building or structure of modular design and construction that meets all of the following criteria:
 - a) It is designed and constructed to be relocatable and transportable over public streets.
 - b) It is designed and constructed for relocation without detaching the roof or the floor from the building.
 - c) It has a floor area of 2,000 square feet or less when measured at the most exterior walls.
 - d) It is sited upon a temporary foundation in a manner that is designed to permit easy removal.
 - e) It shall be removed within three (3) years of installation, unless the school administration requests a 3-year extension.

2. Required Systems

2.1 Automatic Fire Sprinkler Systems

Installation of an automatic fire sprinkler system is required when all of the following conditions apply:

- a) The facility serves K through 12 students.
- b) The campus is a new campus and the plans are submitted to DSA regional offices on or after July 1, 2002.
- c) The project is State funded under the Greene Act. Any amount of such funding qualifies. Private and parochial school campuses and public school campuses 100 percent funded by local funds are not required to install automatic fire sprinkler systems under the law. The provisions found in Chapter 9 of the CBC would prevail.
- d) Buildings on a new campus regardless of occupancy classifications. This includes, among others, assembly buildings such as gymnasiums, multipurpose rooms and auditoriums.

Future buildings constructed on new campuses will also be required to be provided with an automatic fire sprinkler system if those buildings meet the above conditions.

The reduction in CBC and CFC requirements for automatic fire sprinkler systems, found in Chapter 5 of the CBC (-i.e., area increases, height increases, reduction in rating of construction type), and reduction in fire flow (CFC Appendix B, BB, C, and CC) continue to be allowed even though the system is now required.

2.2 Manual and Automatic Fire Alarm Systems

Installation of an automatic fire alarm system with at least one manual fire alarm for the campus is required when all of the following conditions apply:

- a) The facility serves K through 12 students.
- b) The project is State funded under Chapter 12.5 of the Greene Act. Any amount of such funding qualifies. Private and parochial school projects and public school projects 100 per cent funded by local funds are not required to install automatic fire alarm systems under this law. The minimum requirements found in the CBC would need to be met.
- c) Buildings on the campus that are used for educational purposes, regardless of occupancy classifications. This includes, among others, assembly buildings such as gymnasiums, multipurpose rooms and auditoriums.
- d) The campus is a new campus per definitions found in Chapter 2 of the CBC.

Or

If the project is a modernization project including one or more buildings where the total value is in excess of \$200,000 funded under the Greene Act. For this application, modernization projects include new construction on existing campuses, i.e. original campus plans of which were submitted to DSA before July 1, 2002. Fire alarm would be extended to area(s) of modernization work only.

Exception: Temporary portable buildings require a minimum of a manual fire alarm system.

3. System Requirements:

3.1 Automatic Fire Sprinkler Systems

Automatic fire sprinkler systems are to be designed and installed to conform to California Building Code, which adopts NFPA 13, 2010 edition, with State Fire Marshal (SFM) amendments.

Or

Alternative protection may be used where permitted in CBC Chapter 9, Sections 903.1.1 and 904.1.

3.2 Manual and Automatic Fire Alarm Systems

Manual and Automatic fire alarm systems are to be designed and installed per CFC, Article 760, which along with the CBC adopts NFPA 72, 2010 edition with SFM amendments,

- 3.3 Manual Initiation.** At least one manual fire alarm shall be installed with Manual and Manual /Automatic systems for the purpose of manually initiating the fire alarm system. The manual fire alarm shall be in the administration office area.
- 3.4 Occupant Notification.** Notification must be a feature of any system serving more than 1,000 occupants. The notification feature shall be consistent with the requirements for audible and visible notification as described in NFPA 72 with California amendments found in Chapter 35 of the CBC. Audible notification shall be the temporal, three-pulse, pattern. In addition, an audible alarm notification appliance shall be mounted on the exterior of buildings to alert occupants at the playground area(s).
- 3.5 Supervising Station.** All automatic fire alarm systems shall transmit the alarm, supervisory and trouble signals to an approved supervising station. The supervising station shall be listed as either UUFX or UUJS by Underwriters Laboratory or shall meet the requirements of Factory Mutual Research Approval Standard 3011. A statement that supervision will be provided, and shall be verified by the project inspector prior to close out, is required on plans submitted to DSA.
- 4. Additional Information**
Frequently asked questions and a chart proving an overview of fire alarm requirements are presented in the Appendices.

Appendix A: SB 575 Frequently Asked Questions

Appendix B: Fire Alarm Requirements for Educational Buildings in California Under the 2007 and 2010 CBC.

Appendix A

GREEN OAKS FAMILY ACADEMY ELEMENTARY SCHOOL FIRE PROTECTION ACT (SB575) FREQUENTLY ASKED QUESTIONS

General

For an overview of requirements, see the accompanying chart (Appendix B):

Fire Alarm Requirements for Educational Buildings in California, Under the 2007 and the 2010 CBC

Question #1:

What is the definition of new or existing campus in the Green Oaks Family Academy Elementary School Fire Protection Act and the California Building Code (CBC)?

Answer:

Education Code Section 17074.50 and definitions within the CBC Chapter 2 identify new and existing schools as follows:

New Campus means a school project consisting of one or more buildings on a new site for which application made to DSA on or after July 1, 2002, per definition found in CBC Chapter 2, Section 202. This would include adding future new buildings to these new campuses.

Existing Campus means a school project consisting of one or more buildings on a site for which application made to DSA prior to July 1, 2002, per definition found in CBC Chapter 2, Section 202.

Note: If all the buildings were demolished on an existing site, the new buildings would be considered a new campus per date of application.

Question #2:

Solely for the purposes of the Green Oaks Family Academy Elementary School Fire Protection Act, what does the term “modernization” mean?

Answer:

The Green Oaks Family Academy Elementary School Fire Protection Act defines modernization as any modification of a permanent structure or construction of a new building, on an existing campus.

Question #3:

Solely for the purposes of the Green Oaks Family Academy Elementary School Fire Protection Act, what is a temporary building and what are the fire alarm requirements?

Answer:

A temporary relocatable building that is sited with the intent that it be on site for less than three years and is placed on a temporary foundation is exempt from the requirements of Sections 17074.50 and 17074.52. Additionally, the public school administration may request a three-year extension of the exemption for said temporary building, which means that the

temporary relocatable building may be sited on the public school campus for a maximum of six years. The fire alarm requirements are a minimum of a manual fire alarm system.

Question #4:

If a relocatable building is moved from an existing K-12 campus to a new campus what would be the requirements for fire alarms and fire sprinklers?

Answer:

A relocatable building moved from an existing campus to a new campus would require a manual and automatic fire alarm and a fire sprinkler system.

Question #5:

Are private and parochial schools subject to the requirements of the Green Oaks Family Academy Elementary School Fire Protection Act?

Answer: No

The Leroy F. Greene School Facilities Act of 1998 commencing with Section 17070.10 of the Education Code funds public school projects that house and/or serve students from kindergarten through twelfth grade (K-12), and does not apply to private and parochial schools..

Even though private schools are constructed without public funding and requirements for fire alarms and fire sprinklers do not fall within the Green Oaks Family Academy Elementary School Fire Protection Act, private schools are required to meet all of the applicable provisions found in the CBC for fire alarm and fire sprinkler requirements.

Question #6:

When the Green Oaks Family Academy Elementary School Fire Protection Act conflicts with the California Building Code, which provisions prevail?

Answer:

The provisions of the Green Oaks Family Academy Elementary School Fire Protection Act, were included in the California Building Code (CBC) in 2002. When the CBC, in subsequent editions, is more restrictive than the Green Oaks Family Academy Elementary School Fire Protection Act, the more restrictive provisions prevail.

Question #7:

Does a stand-alone (separated by required distance per CBC Table 602) new permanent K-12 building placed on a new or existing school campus, when not used for instruction, such as a toilet, storage, or ticket booth, require a manual and automatic fire alarm system as described under Green Oaks Family Academy Elementary School Fire Protection Act or as described under the Group "E" occupancy provisions in the CBC?

Answer: No

Only buildings used for educational purposes where instruction is given are required to have

a manual and automatic fire alarm system for Group “E” occupancies. Other occupancies are required to meet their distinct provisions unless the non-educational activities are part of, grouped with per CBC Chapter 5, or an accessory to an educational building. If a non-educational occupancy is part of an educational occupancy, the most restrictive requirement will prevail.

Question #8:

What type of fire alarm system does the Green Oaks Family Academy Elementary School Fire Protection Act require for a modernization project?

Answer:

For projects funded under the Leroy F. Greene School Facilities Act of 1998, Education Code Section 17074.52(a) stipulates that a modernization project that involves an educational building that exceeds a total estimated cost of at least \$200,000 shall have an manual and automatic fire alarm system installed in the area being modernized. The alarm, upon activation of an initiating device, shall alert all occupants and shall transmit the alarm signal to an approved monitored supervising station.

Additionally, Education Code Section 17074.50(b) allows a modernization project to be completed in more than one phase. The school district may defer the installation of the fire detection / alarm system until the final phase of the modernization project.

Question #9:

Do the requirements of the Green Oaks Family Academy Elementary School Fire Protection Act apply to all public schools that house and or serve students from kindergarten through twelfth grade (K-12)?

Answer: No

Only the public schools that are funded pursuant to the Leroy F. Greene School Facilities Act of 1998 commencing with Section 17074.10 of the Education Code are subject to these requirements.

Note: *Buildings not funded by the Leroy F. Greene School Facilities Act of 1998 are still required to meet applicable minimum provisions of the California Building Code and California Fire Code.*

Question #10:

Are community colleges, colleges, universities or vocational schools required to comply with the requirements of the Green Oaks Family Academy Elementary School Fire Protection Act?

Answer: No

Education Code Sections 17070.75 and 17071.75 clearly indicate that the requirements of the Leroy F. Greene School Facilities Act of 1998 commencing with Section 17074.10 of the Education Code are applicable to K-12 facilities.

Question #11:

Are the requirements of the Green Oaks Family Academy Elementary School Fire Protection Act retroactive?

Answer: No

Approved existing school fire alarms are allowed to remain in place as long as they are operable.

Question #12:

If a public school determines that it is more cost effective to install a sprinkler system in a modernization project in lieu of a manual and automatic fire alarm system, would that methodology comply with the intent of the Green Oaks Family Academy Elementary School Fire Protection Act?

Answer: No

If a school district installs an automatic fire sprinkler system in a modernization project with an estimated cost of \$200,000 or more on a "new" or "existing" campus, a manual and automatic fire alarm system is still required.

Question #13:

How many manual fire alarms are required for a school campus?

Answer:

A minimum of one manual pull fire alarm is required at a constantly attended location and others as required by code edition at the time of plan review and approval of plans.

Fire Alarm Requirements for Educational Buildings⁴ in California, Under the 2007 and the 2010 CBC

The outline below provides a summary of minimum fire alarm requirements for California school buildings (where instruction given), for kindergarten through 12th grade. The outline is designed as a general guide; not for use by design professionals for school building design. This guideline has been prepared by the Division of the State Architect (DSA) in consultation with the State Fire Marshal (SFM). There are differences in the same cited code Section between the 2007 and the 2010 CBC.

	2007 California Building Code & Green Oaks Family Academy Elementary School Fire Protection Act (SB 575)		2010 California Building Code & Green Oaks Family Academy Elementary School Fire Protection Act (SB 575)	
Application period	Project plans submitted to the DSA between January 1, 2008 and December 31, 2010		Project plans submitted to the DSA between Jan 1, 2011 and December 31, 2013	
	State Funded ¹ CBC 907.2.3.7	Not State Funded ¹ CBC 907.2.3	State Funded ¹ CBC 907.2.3.7	Not State Funded ¹ CBC 907.2.3
Manual Alarm ² System Required (No Automatic System Required)	<ul style="list-style-type: none"> Relocatable placed on school sites for less than 3 years Building alteration/modernization costing less than \$200,000 	<ul style="list-style-type: none"> Building alterations/modernizations of existing structure which has a manual alarm that was code compliant at the time of construction Buildings with occupant load less than 50 or containing one classroom. <p>(See CBC 907.2.1 specific requirements for assemblies)</p>	<ul style="list-style-type: none"> Relocatable placed on school sites for less than 3 years Building alteration/modernization costing less than \$200,000 	<ul style="list-style-type: none"> Building alterations/modernizations of existing structure which has a manual alarm that was code compliant at the time of construction Buildings with occupant load less than 50 or containing one classroom. <p>(See CBC 907.2.1 specific requirements for assemblies)</p>
Both Automatic ³ and Manual ² Alarm Systems Required (See exceptions where applicable)	<ul style="list-style-type: none"> New permanent buildings Relocatable placed for longer than 3 years Building alterations/modernization in excess of \$200,000 (limited to the area of alteration/modernization) 	<p>New buildings with an occupant load of 50 or more or containing more than one classroom.</p> <p>(See CBC 907.2.1 specific requirements for assemblies)</p>	<ul style="list-style-type: none"> New permanent buildings Relocatable placed for longer than 3 years Building alterations/modernization in excess of \$200,000 (limited to the area of alteration/modernization) 	<p>New buildings with an occupant load of 50 or more or containing more than one classroom.</p> <p>(See CBC 907.2.1 specific requirements for assemblies)</p>

¹ **State Funded** – Projects funded, in whole or in part, under the Leroy F. Greene School Facilities Act of 1998.

² **Manual Fire Alarm** – A manually operated device used to initiate an alarm signal. The manual device requires human activation.

³ **Automatic Fire Alarm** – As applied to fire protection devices, is a device or system providing an emergency function without the necessity for human intervention and activated as a result of a predetermined temperature rise, rate of temperature rise or detection of smoke. Automatic does not require anyone to activate an alarm.

⁴ **Educational Building** – Group “E” Occupancy as described by the CBC Section 305. Group includes among others, the use of a building or structure, or a portion thereof, by more than six persons at any one time for educational purposes through the 12th grade.